IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| Assignee: | Dell Products, L.P. | | |
| Title: | Continuity Of Supply Risk And Cost Management Tool | | |
| Serial No.: | 09/896,992 | Filing Date: | July 2, 2001 |
| Examiner: | Beth Van Doren | Group Art Unit: | 3623 |
| Docket No.: | DC-02825 | Customer No.: | 33438 |

Austin, Texas
September 23, 2008

*Electronically Filed*

**REPLY TO EXAMINER'S ANSWER**
**AND REQUEST TO REOPEN PROSECUTION**

Dear Sir:

This paper is responsive to the Examiner's Answer dated July 23, 2008, having a shortened statutory period expiring September 23, 2008. Applicant's request that prosecution be reopened before the primary examiner to respond to the new ground of rejection as set forth in Examiner's Answer dated July 23, 2008. Further examination and reconsideration are respectfully requested in view of the amendments and remarks set forth below.

**AMENDMENTS**

*In the Claims*

1. (Canceled)

2. (Currently Amended) A computer implemented method of identifying potential risk, the risk due to potential disruptions in material supply to a manufacturing facility, the method comprising:

determining, via a computer system, a set of components for an assembled product;

storing, via the computer system, the set of components;

determining, via the computer system, a set of sub-components for the set of components;

storing, via the computer system, the set of sub-components;

combining, via the computer system, the set of components and the set of sub-components; and,

identifying, via the computer system, potential risk due to potential disruptions in continuity of material supply of a component from the set components and the set of sub-components, the potential risk due to potential disruptions in continuity of material supply including risks associated with supplier power risk, geopolitical risk, capital cycle risk and innovation risk.

3. (Previously Presented) The computer implemented method as recited in claim 2, further comprising:

storing a country of origin of the set of components.

4. (Previously Presented) The computer implemented method as recited in claim 2, further comprising:

storing an indicia of the geopolitical risk associated with the country of origin of the set of components.

5. (Previously Presented) The computer implemented method as recited in claim 2,

further comprising:

storing an identity of a supplier of the set of components.

6. (Previously Presented) The computer implemented method as recited in claim 2, further comprising:

storing an identity of an assembler of the set of components.

7. (Previously Presented) The computer implemented method as recited in claim 2, further comprising:

determining a product assembled by a manufacturer, the product including the set of components.

8. (Previously Presented) The computer implemented method as recited in claim 2, wherein the identifying potential risk further comprises:

identifying an end-of-life date of the set of components.

9. (Currently Amended) The computer implemented method as recited in claim 8, wherein the identifying potential risk further comprises:

determining whether components are at-risk due to ~~a~~ the capital cycle risk, the capital cycle risk being determined by predictability of demand versus supply and capital flexibility.

10. (Previously Presented) The computer implemented method as recited in claim 2, further comprising:

storing the identity of a fabricator of the set of components, wherein the identity of the fabricator includes the name of the foundry.

11. (Previously Presented) The computer implemented method as recited in claim 2, wherein the identifying potential risk further comprises:

evaluating geopolitical risk based upon geographic concentration and a risk associated with a geographic location.

12. (Previously Presented) The computer implemented method as recited in claim 2, wherein the identifying potential risk further comprises:

evaluating whether components from the set of components are implicated based upon the innovation risk.

13. (Previously Presented) The computer implemented method as recited in claim 2, wherein the identifying potential risk further comprises:

evaluating whether components from the set of components are implicated based upon an identified risk due to a supplier concentration.

14. (Previously Presented) The computer implemented method as recited in claim 2, further comprising:

identifying components within a fixed period of an end-of-life date.

15. (Previously Presented) The computer implemented method as recited in claim 2, further comprising:

receiving a production plan and generating a material requirement plan for a component.

16. (Previously Presented) The computer implemented method as recited in claim 15, further comprising:

if quantities of the component are not available to support the material requirement plan for the component, identifying that shortages of the component are possible.

17. - 47. (Cancelled).

48. (Currently Amended) A computer implemented method of identifying potential risk, the risk due to potential disruptions in material supply to a manufacturing facility, the method comprising:

identifying, via a computer system, a set of components for an assembled product;

identifying, via the computer system, respective sets of sub-components, the respective sets of sub-components being combined to provide a corresponding component of

the set of components, each of the respective sets of sub-components comprising sub-components; and,

identifying, via the computer system, potential risk due to potential disruptions in continuity of material supply of any components from the set components and any sub-components of the respective sets of sub-components, the potential risk due to potential disruptions in continuity of material supply including risks associated with supplier power risk, geopolitical risk, capital cycle risk and innovation risk.

## REMARKS

Claims 2-16 and 48 are pending in the application.

Claims 2-16 and 48 stand rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.

Claims 2 – 16 and 48 stand rejected under 35 U.S.C. 103(a) over Feldman et al., U.S. Patent Publication No. 2002/0188496 A1 (Feldman) in view of Hendrick, et al. "Production/Operations Management," Richard D. Irwin, Inc., 1985, Chapter 11, pages 226-244 (Hendrick).

When discussing the 35 U.S.C. § 101 rejection, the Examiner set forth:

> Here, applicant's method steps, fail the first prong o f the new Federal Circuit decision since they are not tied to another statutory class and can be performed without the use of a particular apparatus. Additionally, there is no transformation of the data performed by the method steps cited. Thus, Claims 2 – 16 and 48 are non-statutory since they may be performed within the human mind and fail to positively recite a transformation of data. (Examiner's Answer dated July 23, 2008.)

The claims have been amended to make it clear that each of the steps of the method is performed via a computer system.

Additionally, it is respectfully submitted that the steps as claimed transform data in such a way enable identifying, via the computer system, potential risk due to potential disruptions in continuity of material supply of a component from the set components and the set of sub-components, the potential risk due to potential disruptions in continuity of material supply including risks associated with supplier power risk, geopolitical risk, capital cycle risk and innovation risk, as claimed.

Accordingly, it is respectfully submitted that the claims as amended are statutory.

**Claims 2-16 and 48 are allowable over Feldman and Hendrick.**

The present invention generally relates to identifying potential risk due to potential disruptions in material supply to a manufacturing facility. One aspect of the invention is the appreciation that disruptions in material supply can occur from sub-components that are combined to provide components. Identifying risks associated with these sub-components can enable determining potential disruptions in material supply that would otherwise not be identified. So for example, if there were a potential disruption due to resistors that are needed to fabricate a printed circuit board, where the printed circuit board is the component being supplied to a manufacturing facility, to risk associated with the resistor would affect supply of the printed circuit board.

Feldman relates to managing supply chain risk. Feldman discloses identify which components are most critical to the assembly of a final product, in terms of placing the largest amount of revenue or profit at risk. The impact on profit and revenue of the failure to effectively deliver these critical products is then quantified. The revenue and profit distribution from the supply chain is characterized given a projected distribution supply uncertainty, taking into consideration that input products are only useful if all of the BOM components are present. The revenue at risk is then determined. From the set of possible final products that can be produced, the portfolio of final products with the best risk-return characteristics are determined.

When discussing Feldman, the Examiner set forth:

> Feldman et al. does not expressly disclose innovation risks or determining a set of sub-components for the set of components and combining the set of components and the set of sub-components.
>
> Hendrick et al. discloses:
>
> determining a set of sub-components for the set of components (See pages 228-9 and page 231, figure 11-3 wherein subcomponents and subassemblies are determined); and
>
> combining the set of components and the set of sub-components (see page 230-232, which discuss building a bill of materials and product structure trees by combining this information; (Office action dated July 25, 2007, Page 7.)

Hendrick relates to material requirements planning (MRP) in the context of production management. Hendrick discloses bills of materials and product structure trees (see e.g.,

Hendrick p. 230, 231 and Figure 11-3). Hendrick further discloses requirements of a data base that is used for material requirements planning. However, neither Feldman nor Hendrick disclose or suggest identifying potential risk due to potential disruptions in material supply of components and sub-components, as required by claims 2 and 48.

In the "Response to Arguments" portion of the Final Office Action, the Examiner set forth:

> Applicant's arguments with regards to the rejections based on Feldman et al. (U.S. 2002/0188496) in view of Hendrick et al. ("Production/Operations Management") have been fully considered, but they are not persuasive. In the remarks, Applicant's argue that neither Feldman et al. nor Hendrick et al. teach or suggest identifying potential risk due to potential disruptions in material supply of components and sub-components, the potential risks including risks associated with supplier power risks, geographical risks, capital cycle risks, and innovation risks (Final Office Action dated January 8, 2008, Page 2).
>
> In response to this argument, examiner respectfully disagrees. Feldman et al. is specifically directed to identifying and monitoring supply chain risk. The supply chain supplies material, such as components and products made up of components (see title, abstract, paragraphs 10-11 and 43). Events that may occur and may disrupt the supply chain (i.e. risks) are identified and monitored to see affect on the supply chain. See paragraphs 7, 14, 43, 45, 48, 86, and 89, which specifically disclose risks associated with geography (location, earthquakes, fires, natural disasters, etc.) and political issues (see political risk insurance, wars, political turmoil, strikes), as well as capital risks (credit risks, etc.) supplier power (labor availability, supply on hand, etc.). See also paragraphs 11-12 and 38. Feldman et al. does not expressly disclose innovation risk, but examiner took official notice that innovation risk was old and well known, which has not been challenged (see non-final action, response to arguments, dated 7/25/07) (Final Office Action dated January 8, 2008, Pages 2-3).
>
> Further, Hendrick et al. was relied upon to teach a set of sub-components for the set of components. See pages 228-9 and page 231, figure 11-3, and page 232, which discuss building a bill of materials and product structure trees by combining this information, wherein subcomponents and subassemblies are determined Hendrick et al. and Feldman et al. are analogous (both disclose components parts being supplied by a supplier that supply the component to the manufacturer, as well as supplier, geopolitical, and capital risks associated with this supplying. Feldman et al. further discloses bill of materials and identifying the components that are assembled to produce a final product. Hendrick et al. specifically discloses determining assembly and subassembly parts, generating bill of materials, and the problems that can possibly occur when procuring different parts from different outside vendors, such as the parts coming too early, too late, etc. Therefore, Hendrick et al. and Feldman et al. do specifically meet the limitation as claimed (Final Office Action dated January 8, 2008, Page 3).

However, it is respectfully submitted that merely combining a system which manages supply chain risk by identifying which components are most critical to the assembly of a final product, in terms of placing the largest amount of revenue or profit at risk, as taught by Feldman, with a teaching of subcomponents, as taught by Hendrick, does not disclose or suggest identifying potential risk due to potential disruptions in material supply of a component from a set of components and the set of sub-components, as required by claims 2 and 48.

More specifically, Feldman and Hendrick, taken alone or in combination, do not teach or suggest a computer implemented method of identifying potential risk due to potential disruptions in material supply to a manufacturing facility where the method includes identifying *potential risk* due to *potential disruptions in material supply* of a component from the set components and *the set of sub-components* much less where the potential risk due to potential disruptions in continuity of material supply includes *risks associated with geopolitical risk, capital cycle risk and innovation risk*, all as required by claim 2. Accordingly, claim 2 is allowable over Feldman and Hendrick. Claims 3 - 16 depend from claim 2 and are allowable for at least this reason.

Feldman and Hendrick, taken alone or in combination, do not teach or suggest a computer implemented method of identifying potential risk, the risk due to potential disruptions in material supply to a manufacturing facility where the method includes *identifying respective sets of sub-components*, the respective sets of sub-components being combined to provide a corresponding component of the set of components, each of the respective sets of sub-components comprising sub-components, and identifying potential risk due to potential disruptions in continuity of material supply *of any components from the set components and any sub-components of the respective sets of sub-components*, much less where the potential risk due to potential disruptions in continuity of material supply includes *risks associated with supplier power risk, geopolitical risk, capital cycle risk and innovation risk*, all as required by new claim 48. Accordingly, claim 48 is allowable over Feldman and Hendrick.

## CONCLUSION

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the examiner is requested to telephone the undersigned at 512-338-9100.

The Commissioner is authorized to deduct any additional fees which may be necessary and to credit any overpayment to Deposit Account No. 502264.

I hereby certify that this correspondence is being electronically submitted to the COMMISSIONER FOR PATENTS via EFS on September 23, 2008.

*/Stephen A. Terrile/*

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Respectfully submitted,

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